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BUREAU OF PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 6 1927

REPORT FOR WEEK ENDING AUGUST 6, 1927.

JUDITH BASIN:

Good growing weather has prevailed during the week and all crops have advanced toward maturity. Winter wheat is maturing with good yields in prospect.

Spring grains are not up to average at this date. Early seeding appears most promising and unless rain comes will outyield late sown fields. Barley is heading short. Oats are about average in height. Corn has made considerable progress although it is still much behind the normal stage of maturity for this date.

Stacking of hay and grasses was completed with exceptionally good yields for all forage crops recorded. Second cutting of the sweet clover varieties and harvesting of annual forage crops is in progress. Plots of Sixty-Day oats on the rotations have been cut as well as early maturing varieties on the Cereal project.

A good deal of wild oats has been rogued from the rotations. Quack grass is also a serious problem on the grass rotations and thorough eradication is planned for the control of this pest.

In company with Superintendent Morgan of the North Montana Station, and Messrs. J. A. Clark, and B. B. Bayles of the Cereal Office, a trip was made to the Lethbridge, Swift Current, and Saskatoon Canadian Stations. Mr. Morgan is summarizing the important features of the detailed account which was previously sent in to the office.

Visitors during the week included Chancellor M. A. Brannon of Montana, J. A. Clark and Karl Quesenberry of the Cereal Office, Louis Vinke of the Montana Station; also, County Agent Cameron with a representative group of Cascade County farmers, and County Agent Mountjoy with Judith Basin County farmers, and the Stanford Kiwanis Club.

Maximum temperature 85, minimum 43; precipitation, .26 inch.

SHERIDAN:

Heavy rain the first of the week and light showers during the remainder of the week delayed harvest considerably, while the grain continued to ripen quite fast. Temperatures were low for the season until Friday. Harvesting of oats in the rotations was completed with the exception of two plots that have ripened slowly. Winter wheat in the rates and dates of seeding, with the exception of the later seedings, and the varieties of the same grain have also been cut.

Sheridan, continued:

Wheat in the rotations is beginning to turn. The greater part of the durum wheat in the varieties and the rotations is lodging considerably. A Kota-Marquis cross received from Fargo this spring also is lodging badly.

Maximum temperature 84, minimum 44; precipitation, 1.15 inches.

HAVRE:

The week was reasonably warm with .53 inch of rain falling on Saturday night, July 30. All crops, especially corn made very rapid progress. Small grains are maturing very normally and flax has made good growth and will probably show better yields than in any year since 1916. Second cutting of alfalfa was cut on the plots as well as most of the grain hays.

A trip was made into Blaine County on the 6th and it was noted that quite a large number of fields were infected with stem rust, some of them rather severely. It is quite probable that some of the late grains will be seriously damaged.

Harvesting is progressing with most of the winter wheat in the shock. Part of the barley and oats is also cut.

DICKINSON:

Grain crops made favorable growth during the week but it was a little too cool for corn.

Early oats and barley varieties were harvested on the 6th. Early varieties of wheat and a part of the Marquis wheat on the rotations will be mature during the coming week. Most of the Victory oats on the rotations will also be ripe.

Rust developed rapidly during the week but it still appears that only the late wheat will be reduced in yields to any extent. Oats have very little rust to date.

Crested wheat grass was cut for seed on August 4 and 5. A patch of about 3 acres seeded in 1926 with oats as a nurse crop was too green to cut. All of this grass was cut a little green to prevent shattering. The yield of seed is the heaviest ever harvested at this station.

Dickinson, continued:

Corn is now about fully tasseled, at 5-6 feet high for the Northwestern variety. Unless frost comes much later than average, very little grain will mature.

Work was started on the foundation of the seed house.

Visitors during the week included Messrs. J. A. Clark and Olaf Aamodt, of the Office of Cereal Crops and Diseases, U. S. Department of Agriculture.

Maximum temperature 87, minimum 40; precipitation, .17 inch.

MANDAN:

Agronomy

Favorable weather prevailed during the past week for all field work. Most of the period has been spent in haying. The second crop of alfalfa in the feed fields has been cut. The yield will be very good for the second cutting.

Corn is making a very rapid growth; most of it is now about five feet high.

Grain is ripening fast; much of it will be ready to harvest next week.

Rust has developed rapidly these last several days. Ten days ago it appeared that little damage would result from the rust, but now it looks like a good deal of damage would be done. Some of the later fields of wheat will no doubt be damaged so that the grade will be low. Rust on oats is the worst it has been since the station started.

The total rainfall for July was 2.37 inches, which is about norma for July. The total amount for the year to date is 13.88 inches, as compared with the 50-year mean of 11.70 inches.

Maximum temperature 92, minimum 47; precipitation, Trace.

Cooperative Grazing Experiment

The cattle in all the pastures made good gains during the month of July. Pastures made good gains during the month of July. Pastures remain in excellent condition, and gains should be good for August.

Mandan, continued:

The following gains per head were made for July and for the season:-

Pasture	Gains per head (lbs) July	75 days
100-acres	79.0	230.5
70-acres	76.5	240.5
50-acres	95.5	246.5
30-acres	73.0	219.0
Rotation, 70 acres	71.8	212.1
Brome, 25 acres	82.5	270.6

Blue grama grass is headed out this year more than it has been since 1915.

Horticulture

Peas and early cabbage have been havested from the acre garden. Good yields were obtained. The yield of beans from the early planting was reduced on account of a poor stand, but the later planting is giving good results. About 2,000 sweet corn pollinations have been made.

Tomatoes are looking well, although delayed by hail, which broke off many of the tops. There will probably be a good crop.

Gooseberries and Golden currants were picked during the week. Gooseberries in the breeding blocks yielded more profusely than in any previous year. Golden currants, however, gave poor yields. Fair yield of native black raspberries were obtained from the breeding block, but none of the individual plants showed any marked superiority.

Arboriculture

Mr. Emerson reached Forsyth, Montana, on August 5. He reports a 1926 planting of Chinese elm as having 50 per cent of the trees [illegible] completely killed out, and all of the rest frozen back to the ground. He also observed private plantings of native cedar and Yellow pine, the first 6 feet high, and the latter 16 to 20 feet high, both in fine shape.

Mr. Matthew reached Conrad, Montana, on August 2. His reports show that very few farmers provide more than a 3 foot strip of cultivat[illegible] ground on the outside edge of the shelterbelt. This space is soon overhung by the branches of the trees, with the result that sod soon works in, even to the inside rows.

Mandan, continued:

Mr. George arrived in Cheyenne, Wyoming, on August 3. Heavy rains in the territory through which he passed during the week, made the roads off the main highways so wet that it was impossible to reach one or two plantings. He reports a cooperator in Johnson County, who planted his trees 6 by 12 feet apart to allow the use of a 10-foot disk for cultivation. He later took out half the trees to give a spacing of 12 by 12 feet. While the trees are still making an excellent growth, the belt is too open to afford any shelter from wind and snow.

About 350 pounds, field weight, of Caragana seed was picked at the station during the week.

Visitors of the week included Messrs. J. A. Stephenson, and C. C. Thomas, Foreign Plant Introductions, L. W. Boyle, Flax Diseases, J. Allen Clark, Western Wheat Investigations, Olaf S. Aamodt, Cereal Breeding Investigations, and R. S. Towle, Superintendent, Sheridan (Wyo.) Field Station.

BELLE FOURCHE:

The weather during most of the week has been unusually cool with the exception of the last couple days which have been quite warm. A slow rain of .45 inch precipitation was received on August 1, and practically no run-off occurred.

A total of 4.26 inches of rainfall was received during July, as compared with the 19-year average for July of 2.36 inches. The total precipitation from January 1 to August 1 was 19.58 inches, or 8.97 inches greater than the average total precipitation for the same months and 3.74 inches greater than the average annual rainfall.

Corn and sorghum have made an exceptionally good growth. Winter rye is ripe and winter wheat is maturing very rapidly. Oats and barley are turning color.

Grasshoppers have become very numerous on a number of the plots and two distributions of poison bran mash have been made. The wheat stem maggot has done a slight amount of damage to spring wheat, and sprin wheat also contains some naked smut. Very little stem rust is present on the durum wheat in the rotations, but the rust infection in fields of common spring wheat in this locality is quite heavy.

Maximum temperature 88, minimum 51; precipitation, .45 inch.

ARDMORE:

Field operations during the week were interrupted by frequent showers. There was some hail damage in the vicinity of the station but none at the station.

Stacking of the second cutting alfalfa was completed during the week. Some of the hay was damaged by rains, but most of it was stacked in good condition.

All of the oat plots except two were harvested during the week. All of the barley plots and part of the winter wheat plots were also harvested. A few of the wheat and barley varieties and nearly all of the oat varieties were in the shock by Saturday night.

The steers on pasture continued to make good gains. The July gains of the different lots were as follows:

80-acre pasture	66.0 lbs. per head
150-acre pasture	128.5 " " "
160-acre rotation pasture	49.7 " " "
320-acre reserve pasture	64.0 " " "

Maximum temperature 86, minimum 49; precipitation, 1.08 inches.

ARCHER:

The weather has continued humid and cool with precipitation recorded every day but Friday, August 5, the total for the week being 1.81 inches. The mean maximum temperature for the week was 69.9 degrees. During this time the corn has not made much progress but the small grains are doing well. The sunflowers and millet have made rapid growth Potatoes are setting on heavily and the peas are stretching out. Due to the cool weather the beans are at a standstill. The late seeded barley in the dairy field is heading and for Smyrna is becoming quite tall. On the Dry-Land plots this variety is nearly ripe.

Work at the station has consisted of digging trench, hauling manure, hoeing weeds and repairing machinery.

Mr. J. M. Stephens, of the Northern Great Plains Field Station, and Director W. L. Quayle, of the University of Wyoming, visited the station August 5.

Maximum temperature 85, minimum 49; precipitation, 1.81 inches.

AKRON:

Showers each afternoon seriously interfered with threshing progress during the week. By scattering bundles in the forenoon it was possible to thresh a part of the afternoons, so that some little progress was made. The threshing of the winter wheat on the sheep rotations was completed, and the barley on this project was threshed as well as the rotation barley and oat plots. The yields obtained were in line with prospects except one of the sheep rotation barley fields. The winter whea on the 2-acre pastured rye field yielded 8.9 bushels per acre. The barley on the corn land on the pastured rye rotation yielded 32.5 bushels per acre, while barley on the same preparation on the pastured fallow rotation yielded only 24.6 bushels per acre. There was not this observed difference in the two fields and the greater yield of Sheep Rotation 51 barley field must be attributed largely to its location at the extreme north end of the project on lower ground where it was possible for the grain to fill out more plump.

The highest yield of barley on the rotation plots was 51 bushels per acre on fallow in the M. C. series. The lowest yield of barley on the rotation plots was 20.2 bushels per acre on subsoiled land in the M. C. series. The highest yield of oats on the rotation plots was 61.6 bushels per acre on fallow in the M. C. series, while the lowest yield was 17.5 bushels per acre on disked corn land in Rotation 32. The yields of barley and oats were considerable higher than the 18-year average at this station, and the prospect of building up averages again is welcomed. Averages of small grains have been rather consistently torn down since 1920.

July and, thus far, August have been characterized by numerous small showers which have been remarkably effective due to their frequency and the accompanying cool, cloudy weather. July passed with a total precipitation of 3.00 inches made up of showers on 19 of the 31 days. Thus far August has received .75 of an inch, received in showers on 4 of the 7 days. Last Sunday a rain of .65 inch was received, accompanie by a high wind and some hail. The hail damaged standing grain about 25% and it severely lacerated the leaves of corn and the sorgos. The reporting of local hail storms has been frequent during the past two or three weeks. These numerous small showers have made it difficult to accomplish harvesting and threshing. Not more than about one-half the small grain acreage in this region has yet been harvested. Combined harvesters have been privileged to run very few days, so that the acreage destined to be harvested by this method stands perhaps 75% intact.

Akron, continuod:

Visitors to the station included Mr. W. W. Burr, of the Nebraska Station and numerous farmers.

Sheep weights August 1 showed the lot of lambs pasturing on Russian thistles on the pastured fallow field to be high. Weeds on the station are well under control again.

Maximum temperature 87, minimum 50; precipitation, 1.54 inches.

NORTH PLATTE:

Breaking of the drought, which had extended over a six weeks period, excellent rains were received early in the week. The total amount was 2.35 inches. This fell rather slowly and there was but little runoff. The penetration into the soil is from 18 to 24 inches.

Early fall plowing was immediately begun and will be finished on the D. L. A. plots today.

Corn, pastures, and forage crops are coming on in fine shape.

COLBY:

The weather remained too wet and foggy for threshing all week. Threshing was started today, though it was a little tough. Winter wheat plots, which were threshed today, yielded from 0.7 bushel to 6.0 bushels per acre. Those yields included the highest and lowest yielding wheat on the station. Test weight of the wheat ran from 45 lbs. to 53 lbs. per bushel. The yields and test weights given just about include the range of those for this community this season. Many fields of wheat which were left for harvest are hardly paying for the heavesting of them. Heading and combining are still being done. This next week should see the finish of the harvest. Weeds are getting bad in the wheat fields now. The damp weather has hold back harvest considerably.

The corn and sorghums are growing nicely. The weather has been ideal for them with occasional rains, with damp, foggy weather, and with low evaporation and little or no wind. A real soaking rain would just about make the corn. Some of the earliest corn is just in the roasting ear stage now. Most of it is not that far advanced, however.

Weeds are the worst that they have been in a number of years. Many people say that they never saw them as bad. They are bad in the stubble field, in the corn fields, in the sorghum fields, and even in the pastures.

Colby, continued:

The experimental plots and fields have all been hoed but the alleys and borders are still ragged.

Maximum temperature for the week, 92 degrees, minimum 50. Precipitation .72 inch; evaporation, 1.285 inches. Average hourly wind velocity for the 8 ft. anemometer 6.7 m.p.h., for the 2 ft. anemometer 4.5 m.p.h.

HAYS:

The weather continues fairly cool for August with a maximum of 94 and minimum of 54. Three showers fell during the week yielding a total of .60 inch.

In spite of the moderately cool weather and small showers, the corn and other feed crops are needing more rain.

The showers have been very local. The total precipitation for the month of July as recorded by the rain gauge on the Dry Land Project was 1.04 inches, or about one-third normal for July. For the same perio the Weather Bureau gauge measurement, three-fourths of a mile northeast, shows a total precipitation of 1.83 inches.

Corn is still in silk and tassel stage, many new silks coming out each day. Only comparatively few tassels have burned because of heat. More smut perhaps than usual is developing.

Kafir on the project is not yet heading, but is near that stage. On the Forage project the early date plantings are heading and some of the earlier varieties of the medium date planting are also heading.

Work during the week has consisted principally in checking up drainage ditches, and making fills in roads where too much washing has taken place. The roads are being filled to prevent ends of plats from washing.

GARDEN CITY:

Cool, cloudy weather has prevailed during most of the past week. Only light showers of rain were received, but the sky was cloudy the most of five days. The rain of last week revived all crops and they ha made a rapid growth. Milo and kafir are waist high at this time. Cowpeas are beginning to vine.

Garden City, continued:

Field work consisted of plowing and listing for winter wheat and doing odd jobs around the project.

The recent rains in Colorado and farther west in Kansas have caused the Arkansas River to rise. All irrigation ditches have been running full and most of the land under the ditch has been watered.

Professor H. H. Laude was a station visitor Friday.
Maximum temperature 85, minimum 54; precipitation, .45 inch.

DALHART:

The past week has been wet and cool. There has been a general rain covering all of west Texas, Oklahoma and Kansas. In some places as much as 7 inches of rain is reported. Considerable damage was done to roads and bridges. Some hail was recorded in sections but none at the station.

The fields have been so wet that only one day of cultivation could be accomplished. Soil samples and cultivating was done on Monday and the fields have been too wet since. The weeds are making good headway without a chance to check them. They are not bad except on the increase fields where no cultivating has been done. The plot fields are in good shape except for the first two dates of planting in the cereal and forage block. These were partly hoed but not finished on account of rain. The crops on the increase fields are not suffering on account of the weed growth because the weeds are small but they keep growing. About all the field work that has been done since Monday is hoeing, and a part of this was in the tree plantings.

The crops are making excellent headway. Some of the varieties are in the boot and will likely be headed by the end of next week The Sudan grass in the variety test will be ready to harvest next week.
Maximum temperature 93, minimum 55; precipitation, 1.53 inches.

BIG SPRING:

Weather conditions during the past two weeks have remained hot and dry with the result that most of the grain sorghums, especially in the rotations, are suffering considerably.

Big Spring, continued:

The sorghums on fallow are looking good, but the others are burning. Cotton and cowpeas are making a normal growth, although cotton is very late. The grain sorghum varieties are holding up well, and most of them are heading.

The first date of planting of milo, feterita and spur feterita, and the second date of Sudan grass was harvested during the past week. Several varieties of peaches and grapes were picked. The peaches were small and of poor quality, but the grapes were fairly good. The June bug damaged the peaches this year, just as they were starting to ripen.

An increase field of Sudan grass was harvested for hay this week. Other work consisted of cleaning out roadways and hoeing scattered weeds out of the plots.

Maximum temperature 102, minimum 63; precipitation, 0.

LAWTON:

Cloudy, showery weather and favorable temperatures during the past two weeks have been very conducive to row crop development. Sorghum crops that were severely weakened by chinch bug injury have retained life over a much longer period than would have been possible under conditions that usually obtain in July.

Cotton prospects and conditions could not well be improved. Plant growth is vigorous and the well developed plants are heavily set with many well grown bolls, especially in the early plantings. The latter plantings, although no so far advanced, have been fruiting heavily.

Grain and forage sorghums in the cooperative projects have been unable to withstand the chinch bug damage any longer and harvesting of a good many varieties was necessary August 5 and 6. A few varieties that remain will necessarily have to be cut within a few days. In the April 15 plantings considerable grain was produced on several varieties, but it will be of poor quality. When harvested the foliage was dead and the weakened plants were lodging rapidly.

Chinch bugs, alone, are responsible for failures and low yields in 1927, a year that was very favorable to high production of these crops. This damage is prevalent throughout a large part of the state and complaint from farmers is very general.

Lawton, continued:

Cowpeas in the rotations were harvested August 5. A good vine growth was obtained and a heavy crop of seed matured. Some seed has also been picked from varieties that are being increased.

Precipitation for the month of July amounted to 2.65 inches, leaving a deficit of .49 inch Temperatures during the past two weeks ranged from a minimum of 67 to a maximum of 99.

WOODWARD:

The past week has been one of the wettest every experienced here at this time of year. In fact, rain has occurred every day or night during the week, totaling 3.03 inches, with still, cloudy weather prevailing almost continuously. All streams and rivers throughout this section of the country are running high and many highways are impassable.

Favorable moisture conditions during July enabled farmers to prepare fields for wheat and rains following have put the ground in splendid condition. Belated row and hay crops are growing rapidly and many row crops will be too large to permit much needed cultivation before ground is dry enough to get into fields.

Work at the station for the week has consisted of picking fruit, doing construction work at the Dairy, repairing machinery and working roads. Crops which were planted rather late are growing very rapidly. Many of the fields have been cultivated but once, and it has only been possible to do two days cultivation in the past two weeks on account of wet weather. The total precipitation since July 18 is 8.49 inches, which is considerably above the usual amount at this season. If it does not dry up enough to cultivate soon most of the crops will be too tall to get into with anything but one-horse implements.

Mr. Stenhouse was here from Washington, D. C., taking photograph of the Dairy herd. Professor Dickens from the Kansas Agricultural College is visiting the station today, August 6. Mr. E. F. Chilcott, Superintendent, made a trip to Manhattan, Kansas, during the week.

Maximum temperature 94, minimum 59; precipitation 3.03 inches. Evaporation, 1.326 inches. Average hourly wind velocity, 3.9 miles.

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U. S. DEPARTMENT OF AGRICULTURE

AUG 13 1927

REPORT FOR WEEK ENDING AUGUST 13, 1927.

JUDITH BASIN:

With moderately warm days and cool nights, the past week has been favorable for all crops. Winter wheat is being harvested in limited areas where binders are used. A few combines are in operation in the Basin and with continued favorable weather, combining will be well under way next week.

Corn continues to make good growth and the earlier varieties are beginning to tassel out. Corn plots which received light applications of manure give promise of increased yields. Potatoes and beans are making a very noticeable growth.

Stacking of grasses and alfalfa from the miscellaneous blocks was completed. Spring seeded pasture experiments were clipped and sweet clover cut from the fence lines. Winter wheat on the rotations and Cereal project is being harvested. Nursery threshing commenced today.

Mr. V. D. Young, of the Montana Station, working on the Valier Irrigation Project, visited the station early this week.

Maximum temperature 84, minimum 44; precipitation, .78 inch.

HUNTLEY:

Harvesting operations have been continued throughout the week until, with few exceptions, all plots of small grains have been cut. Flax is well bolled but is yet too green to bind.

Light showers have benefited corn and similar late crops that were beginning to look dry, and have also served to start a light growth of weeds in fallow and cultivated plots.

Threshing is in full swing throughout the community and the yields of winter wheat are reported at from 35 to 50 bushels to the acre, with the average about 40 bushels. The quality of grain is generally good.

Station visitors during the week have been Messrs. F. D. Farrel, of the Kansas State College, C. S. Scofield, Washington, D. C., J. M. Stephens, of the Mandan Field Station, and Beyer Aune, of the Bellefourche Station,

Maximum temperature 90, minimum 49; precipitation, .50 inch.

SHERIDAN:

Harvesting has been in progress throughout the week. All small grain in the rotations except spring wheat finally has been cut. A part of the rates of seeding of spring grain, the earlier dates of seeding, the varieites of barley, and a part of the varieties of oats and spring wheat, have been cut. Field seedings of spring grain for increase and feed also have been harvested. Spring wheat in the rotations will be ready to harvest the first of next week. Second growth alfalfa has been mowed.

Only a few of the plots in rows made sufficient growth to secure plot weights, the principal growth being around the borders and in low places.

A destructive hail storm destroyed much grain in this locality the evening of the 9th, but there has been no hail at the station.

Mr. J. M. Stephens visited the station Friday, August 12.
Maximum temperature 89, minimum 47; precipitation, .29 inch.

MANDAN:

Weather favorable for all field work prevailed during the week. The second crop of alfalfa was stacked in excellent condition. The yield ran from less than one-half ton per acre on the higher ground, to better than one ton per acre on the lower ground along the coulee.

Harvesting of small grain has been in progress part of the week. All of the wheat, oats and barley plots were cut in the South field and part of the oats in the Main field. Feed fields of barley and oats were harvested. The yields will average very well, but there will be no bumper yields on the station.

Much of the small grain over this area is cut, and the yields will be very good. Rust is very bad on wheat and oats. The rust will do considerable damage to late wheat, but the earlier wheat will not be damaged to any great extent.

Corn still remains in excellent condition, and has made good advancement during the week. The yield of fodder will be high, and the yield of corn good.

The weather remains dry and a good rain is needed for the corn. There has been practically no rain so far this month.
Maximum temperature 89, minimum 45; precipitation, .37 inch.

Mandan, continued:

Cooperative Grazing Experiment

Grass in the pastures is starting to dry up. Grazing still remains good in most of the pastures, but the 30-acre will soon give out.

Horticulture

The last of gooseberry and golden currant varieties have been picked. There was a very good yield of gooseberries, and the fruit was of exceptionally good size and quality. Raspberries are being picked, but the yield is light, owing to the poor condition of last year's canes.

Budding of apple and crabapple varieties on baccata seedlings in the nursery row was started the early part of the week, and will be continued next week.

The sweet corn breeding, consisting of self-pollinating and crossing some 400 lines of Golden Bantam, Sunshine and Gills Early Market, is now nearly completed for the season. About 2,700 pollinations were made and, since the weather was very favorable during the work, good results are anticipated if early frost does not happen in the meantime.

Harvesting of vegetables, with yield and quality notes taken, has been attended to. The blanching of early celery was started Friday.

Sweet corn in the variety test has been picked during the week. Gills Early Market was first, followed by Sunshine and Golden Bantam. The latter is just beginning to fill, and will be in season next week.

Weeds, especially Purslane (Portulacca sp.) have been quite troublesome lately, and have necessitated considerable hand labor in the various project plots.

Arboriculture

Mr. E. J. George reports several new plantings near Douglas, Wyoming, practically killed out by hail, while older plantings in the same area were not much damaged. Rain continues to make travel slow in this part of Wyoming.

Mr. Lewis Matthew reports trees to be generally in good condition in the territory around Great Falls, Montana.

Mandan, continued:

Mr. John L. Emerson reports an exceptionally fine 1923 shelterbelt near Powderville, Montana, and a 1922 planting three miles away severely damaged by worms.

Visitors of the week included Messrs. R. U. Cotter, Stem Rust Investigations, and C. A. Gillette, Extension Forester, Bottineau (N. Dak.) Forestry Station.

ARDMORE:

The week was favorable for field operations. All harvesting of small grains was completed except two plots of winter wheat. Haying operations were carried on almost all week. About twenty acres of wheat grass on a neighboring farm, and ten acres in the reserve pasture were cut during the week. The wheat grass on the neighboring farm was of exceptionally good quality and was purchased for use in the winter feeding test with steers.

Damage by rust is apparent in some of the wheat plots, particularly in plots M and O of the methods of fallow series. Most of the plots escaped injury. The wheat plot in Rotation 75 was damaged by lodging. The flax plots have commenced to turn. Sorgos are now heading.

All fields and plots of fallow were cultivated with the duckfoot cultivator during the week. The numerous small rains have encouraged weed growth.

The pigs on pasture were weighed during the week. They continue to make satisfactory gains.

Dr. M. M. Davis tested the dairy herd for tuberculosis the first part of the week.

Superintendent J. M. Stephens, of the Mandan Station, and Supt. A. L. Nelson, of the Archer Station, were official visitors. Mr. Nelson was accompanied by Mrs. Nelson and by Commander Pierson of the U. S. Navy. Mr. Stephens was taken to Newell on August 10.

Maximum temperature 88, minimum 51; precipitation, .53 inch.

AKRON:

Rainy weather early in the week interfered with both threshing and field work. It was possible to start threshing before field work could be accomplished. Field work was not started until Friday afternoon.

Akron, continued:

Recent rains have created another weed problem on the station, which it will be necessary to clean up at the expense of time that might well be devoted to threshing.

On Wednesday and Thursday the rotation winter and spring wheat plots were threshed. This clears the rotations plots for early fall plowing which it is hoped can be started next week. On Friday and Saturday morning the cereal variety oat experiment was threshed. Saturday afternoon all teams were taken off the threshing job to accomplish some necessary cultivation to fallow ground and row crops. It will be necessary to stir all fallow and other similar open ground such as the orchards, and it is deemed advisable to cultivate all row crops. The corn and some of the sorgos which are too tall to be cultivated with the two-horse cultivator are being cultivated with one horse attached to a spring-tooth-harrow type of implement. The station soil appears to be especially foul with weed seed this year.

Corn and the sorgos now appear very promising if they can only be protected from weed competition. It is such a season as will eliminate most of the grain sorghums from the maturing class. Coes and Elton sorgo, which during the previous two years have been in full head 57 to 63 days after seeding, are just now breaking into head, the first of the grain sorghums except Freed's, 80 to 85 days after seeding date.

The rotation winter wheat plots ranged in yield from 4.0 bushels per acre on the shallow late fall plowed plot of the M. C. Series to 33.2 bushels per acre on fallow seeded with furrow drill on Rotation 100. The highest yield on the old plots of the main rotation field was 27.7 bushels per acre on corn land on Rotation 81. The spring wheat plots ranged in yield from 5.2 bushels per acre on the deep very late fall plowed plot of the M. C. Series to 21.8 bushels per acre on corn land on Rotation 1.

Oats seeded on last year's bean variety experiment ground yielded at the rate of 33 bushels per acre. Fifty-two one hundredths of an acre of Rosen rye seeded on low ground at the north end of Series 8, Main Field, yielded at the rate of 31.9 bushels per acre.

Winter wheat seeded on small grain stubble land in the bottom of listed furrows, spaced 42 inches apart, yielded 16.5 bushels of excellent quality grain. Rotation 592 seeded on small grain stubble land early fall plowed in cultivated strips yielded 16.0 bushels per acre. Rotation 591, which lies alongside Rotation 592, that is seeded on small grain stubble without previous cultivation, yielded 23.2 bushels per acre. The grain from 591 contained a high percentage of 'yellow berry'.

Akron, continued:

Of the oat varieties Burt 916 produced the highest yield on both fallow and corn land. Fulghum produced second highest yield on both soil preparations. The 4-plot average yield of Burt 916 was 51.6 bushels per acre, while the 4-plot average yield of Fulghum was 50.1 bushels per acre.

Mr. J. M. Stephens visited the station Monday.
Maximum temperature 84, minimum 53; precipitation, 1.37 inches.

NORTH PLATTE:

Early fall plowing on the D. L. A. plots was completed the past week. Alfalfa varieties and the brome grass in Rotation 41 were seeded.

Threshing of the spring grain varieties was practically completed.

Precipitation has been recorded on all but three days of the month to date.

Mr. L. L. Zook has gone to Minnesota to spend his vacation.

DICKINSON:

Wheat harvest is now well started in the district and the outlook is for a good yield though not quite so heavy as a little earlier prospects indicated. Rust has come along fast during the week and the effect is probably greater than during any year since 1916. Most of the early planted grain will not be greatly affected though this too seems lighter than the season should warrant. Late grain will doubtless be very light. The straw in some of the earlier fields is going down on a few of the plants, due in part at least to effect of rust.

A few of the early wheat varieties were harvested and most of the oat and barley varieties were cut. About half of the plots of Victory oats on the rotations were cut. Yields of oats are above average but the grain is not as heavy as in some year.

Corn developed fast during the week and now shows a good many shoots and better than an average amount of fodder. Selfing in the nursery was completed.

Dickinson, continued:

Flax on the April 18 and May 1 dates of seeding in the tillage experiment is about mature. The early seeding promises the best yield. The flax crop is unusually free from Russian thistle due to the fact that this weed was killed by the blizzard of May 8 and 9, and heavy rainfall later in that month.

The foundation of the seed house was completed. A cement floor will be run early in the week.

Maximum temperature 87, minimum 41; precipitation, .13 inch.

BELLE FOURCHE:

Warm weather has prevailed throughout the week and no precipitation was received aside from a light rain on the 7th. Conditions have been very favorable for the maturing of small grains and most of the winter wheat has been harvested. Oats and barley have ripened very rapidly and several plots are ready to be cut. The second crop of alfalfa and sweet clover was mowed and shocked. Corn tasseled during the week.

There is a large amount of stem rust on oats, barley, winter wheat, and common spring wheat, and the infection of durum wheat on the rotations has shown a very marked increase. The yields of small spring grain will be reduced more or less from the effect of the rust, but winter wheat was practically ripe before showing much sign of rust.

Visitors during the week were: Messrs. W. H. Larrimer and Stewart Lockwood, of the Office of Cereal and Forage Insects; S. C. Salmon, of the Kansas Agricultural College; J. M. Stephens; O. R. Mathews, Ardmore Field Station; Mr. and Mrs. A. L. Nelson, Archer Field Station.

Maximum temperature 86, minimum 52; precipitation, .18 inch.

COLBY:

Several showers during the week again delayed threshing somewhat. Threshing was done on three days so that now only the spring wheat and barley varieties remain to thresh. Low yields and low quality of all grains were secured this year. The test weight of oats ran from 16 to 20 lbs. per bushel, while the barley test weight ran from 25 to 39 lbs., and the test weight of spring wheat ran from 45 to 49 lbs. Yields of spring wheat ran from 0.8 bu. to 4 bu. per acre. Oats yielded from 2.8 bu. to 15.6 bu., and barley from 1.6 bu. to 21.0 bu.

Colby, continued:

Most of the corn is in the roasting ear stage. Sorghums are growing nicely and give promise of a good crop.

Maximum temperature for the week 93 degrees, minimum 57. Precipitation 0.71 inch; evaporation 1.576 inches. Average hourly wind velocity for the 8 ft. anemometer 7.5 m.p.h.; for the 2 ft. anemometer 5.0 m.p.h.

GARDEN CITY:

The past week has been cloudy and rain has threatened most every evening, but no moisture was received. For the most part the weather has been cool.

Crops are looking good but are beginning to roll in the heat of the day. The first cutting of Sudan grass for hay was made Tuesday and only a fair yield is expected. Wheat plots that go to row crops next year were disked in order to check weed growth and to cause volunteer to emerge. The wheat seedbed for the date planting test is ready to plant.

Preparations for our annual field day have started. This year the station is cooperating with the Garden City Chamber of Commerce in staging a fair in conjunction with field day. Finney County has no county fair and it is hoped that this attempt will grow into a real fair. The dates have been set for September 7 and 8.

Doctors M. C. Sewall and P. L. Gainey, of the Kansas Station, were here all day Thursday taking soil samples. They plan to make total nitrogen determinations and bacteriological counts on the samples obtained. The same plots were tested for total nitrogen in 1916.
Maximum temperature 94, minimum 57; precipitation 0.

DALHART:

Two good rains were recorded during the week. The remainder of the week has been warm with just a little wind. The fields have dried slowly due to so much rain the past few weeks. The rain has been lighter here at the station than farther east. There seems to have been a very rapid decrease toward the west. In Dalhart 3.00 inches were recorded while we got only 1.35 inches in the same rain. Just a few miles east of Dalhart the rain increased to as high as 7.00 inches in one downpour. A mile west of the station there was just a sprinkle. The other rain seems to have been about equally distributed and netted .78 inch.

Dalhart, continued:

We got in our one day's work this week as usual in the field. On Monday the teams were busy all day cultivating. No further field work could be done until Friday when it was possible to do some hoeing in the cereal-forage block. This is being continued today. Some of the windbreak strips, which had dried off sufficiently, were cultivated today. Other fields are still too wet. A lot of good headway was made during the remainder of the week in catching up with the weeds in various quarters, around the buildings, ornamental and tree plantings, vineyard and orchard. Hedges were trimmed and some mowing done. With reasonably favorable conditions, we expect to have the station up to a creditable showing by the end of next week. The Sudan grass in the forage variety test, (rowed), was harvested today. The drilled plot will be harvested the first of the week.

The crops are making splendid headway. A good many of the varieties are heading, a few are headed and most of them in the boot. For every stalk there seems to be a half dozen succors and all nearly full grown. This is certainly a favorable year for succoring. The succors are in the boot about as early as the parent plants. The first picking of grapes was made this week. Grapes are not so good this year as last, but there is going to be more of them. The bunches of the early ones were small, most of the grapes having shed early due to rigid conditions, wind, etc. They are very uneven in ripening. The yield on the first picking ranged from .3# to 3.6# per vine. There were seven varieties included in this picking.

Maximum temperature 89, minimum 57; precipitation, 2.13 inches.

TUCUMCARI:

Rains falling on eight of the thirteen days of this month, for a total of 3.66 inches, have greatly improved crop and range prospects. Ranges have the appearance of hay fields and the stock which is grazing them is in excellent condition.

Row crops responded greatly to the additional moisture, and unless early frost prevents full maturity of many fields, the grain yield should be higher per acre than in several years, although the acreage is unusually light. Very little milo is in head over this section, but should be heading within a week. Wheat farmers on the cap rock are working day and night preparing an unusually heavy acreage for wheat.

Tucumcari, continued:

Very little team work has been possible on the station the past two weeks, due to frequent rains, but field are comparatively clean as the result of cultivating just before the close of July. Roadways, fence corners, hedge rows and waste spaces were seemingly never so well seeded with weeds, and the appearance around the station buildings is not nearly so satisfactory as that in the fields. The extremely high winds of spring blew weed seed of every description to every conceivable spot and due to the drought practically none of this germinated until about a month ago. Consequently, station grounds are covered by a very uniform dense, husky, rapid-growing crop of assorted weeds. Mowing improves the appearance, but does little to really improve the condition, while hoeing on lawns and native sod is very slow. We are impatiently awaiting some chemist's "Universal Weed Exterminator".

On a 700-mile trip over northern and northeastern New Mexico recently, the writer was impressed with the generally good range, the apparent shortage of cattle, and the abundance of recent general rains. Three months ago cattle were in poor condition, the range dry as tinder, and cattle owners willing to sell at almost any price, with no buyers. At present, cattle prices have more than doubled, owners are enthused and would purchase more livestock if possible, while no one desires to sell, except at a premium. In the Cimarron canon, northern New Mexico, it was said that cows with calves could have been purchased in May for $25 each, while now they are held at from $75 to $85. Irrigation is rapidly increasing in the mountain valleys and the crops of alfalfa, wheat, oats, corn, potatoes and garden truck were excellent with but few exceptions. It seemed rather striking at Tierra Amarilla, an old Mexican town, to find practically the entire population, including tradesmen, Mexican, in most cases speaking but little English, while in an irrigated neighborhood, four to ten miles away, practically the entire group were Anglo, selling their produce to the nearby natives of whom they purchased groceries and clothing.

Maximum temperature 92, minimum 57; precipitation, .61 inch.
Evaporation, 1.816 inches. Average hourly wind velocity, 3.8 miles.

HAVRE:

The past week was a little cool for this season of the year, showing a maximum of 89 degrees and a minimum of 47. Even though there was no rain, crops continued normal development. The harvesting of early oats and barley is complete. The earliest spring wheat is ready to cut. Second cutting alfalfa on the rotations was hauled in.

Havre, continued:

The two plots in Rotation 42 made one and one-half and one and one-quarter tons each for this cutting. This is the first year since the station started that we have had a second cutting of any particular value.

Considerable interest is being shown in this section of Montana in the growing of certified Bliss Triumph potatoes. These are grown for seed and sold to Southern growers mostly from Louisiana. The Louisiana people made a tour of this county the first of this week looking over the potato fields.

A few of the growers in this county are growing them on fallow on dry land. When these fields are closely rogued, eliminating the Mosaic, Spindle tuber and similar diseases, they have a specially high value for seed purposes in the Southern states. Very few of the fields grown under irrigation will be irrigated this year but it is probable that yields will be very good.

HAYS:

There is little of interest to report from this station except that rains have been falling frequently during the first half of this month and especially during the past week when rain fell on four days in measurable quantities with a total for the week of 3.85 inches. The record to date has already passed the normal amount for August with half the month yet to run and prospects at present writing are good for more rain.

This vicinity has been fortunate in not having any destructive storms with the rains, while within a radius of 50 miles localities have suffered severe losses from wind storms, severe hail storms and floods. The heaviest rainfall for any one 24-hour period at the station was 1.47 inches, while in certain localities the rainfall is reported to have varied from 6 to 11 inches, resulting in destructive floods. On account of damage by flood waters, Hays has had no through train service east since Thursday and no trains from Kansas City are promised before Monday or Tuesday.

Wet weather has prevented any field work except repairing of drainage ditches.

The wet weather has been somewhat of a handicap to the chinch bug population, in the corn and sorghums, but still there remains enough survivors to limit the possibilities of crops on certain plots.

Hays, continued:

Generally, there has been but little wind during the past two months. The average will be below normal, but in spite of that fact surface planted corn has suffered some injury on the plots from wind. The brace roots of the corn fail to get hold of the ground and as a result light winds from varying directions break the roots until the corn has not sufficient support to stand. Listed corn being set a little deeper seems to offer a better opportunity for the brace roots to get into the ground, and as a result listed corn does not blow down nearly as bad as surface planted corn.

As a rule, the corn in rotations stand out alone, more or less isolated and exposed so as to get full sweep of the wind and always suffers sufficient injury from the winds to prevent normal average yields for the country. The wind damage plus insect injury cuts down the average yield on these plots so it seems unfair to corn even though this is not a corn country. It is the opinion of the writer that the corn on plots in our rotations should be planted with a lister instead of surface planted as it is done on the fall and spring plowing.

BIG SPRING:

Another week of dry, hot weather has prevailed with the result that feed crops have burned just a little bit more. Nearly every day the clouds gather, and all other signs of rain are present, but the station has received only .10 inch from these attempts. Good rains have been reported within four miles of the station but they only covered a small area.

Cotton is making a rapid growth throughout the county but considerable boll worm damage is being reported in the earlier planted fields. The first and second dates of the station planting are also showing some damage from this pest.

Work this week has consisted of cutting Sudan grass, and in harvesting some of the earlier maturing cowpea plots. The cotton and peanut plots were cultivated and the stray weeds hoed out of these plots.

Maximum temperature 103, minimum 68; precipitation 0.

LAWTON:

A sweltering period of heat from August 6 to 8, when the maximum temperatures ranged from 99 to 102 terminated with rains and cooler weather throughout the remainder of the week. The rains were quite general throughout a large territory but varied greatly in character and amount.

Lawton, continued:

Optimum growing conditions for vegetation of all kinds continue and a more hopeful, cheerful, optimistic spirit prevails among the farm people. Very little money was derived from small grain crops this year but good yields of corn and a brilliant prospect of a large cotton crop that may be sold at a profitable price offsets the gloomy, discouraging sentiments that prevailed in farm circles earlier in the season.

Harvest of the grain cooperative sorghum project was completed August 8. Although the harvest was very early and in many cases premature, it was necessary because of the excessive lodging of the weakened plants during the short period of high temperatures.

In Field A the chinch bug infestation was not so early nor so heavy in the rotation kafir and feterita, and these crops, with but few exceptions, are growing very satisfactorily.

Messrs. L. F. Locke, and E. F. Chilcott, in company with Professor Albert Dickens, of Manhattan, Kansas, were station visitors August 7 and 8.

The total precipitation for the week amounted to 1.50 inches.

WOODWARD:

The entire week has been devoted to cultivating with all available power. This is the last cultivation of the season for most crops and puts all land in excellent shape. Due to the unusually heavy rainfall in July and August, all sorghum crops are making a very rapid and excessively heavy growth. The wet weather has also made it easy for farmers to prepare all wheat land for fall seeding early in the season. Optimism with farmers and in the small towns is, therefore, the order of the day.

Grape harvest is at its peak. Quantity of fruit is greater than usual and quality is excellent. Trees and shrubbery have a luxuriance of foliage seldom seen in the semi-arid sections.

The Annual Field Day has been set for September 10. An unusually good program has been arranged and a larger attendance than usual is expected.

Maximum temperature 96, minimum 65; precipitation, .10 inch. Evaporation 1.722 inches. Average hourly wind velocity, 3.5 miles.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 20 1927

REPORT FOR WEEK ENDING AUGUST 20, 1927.

JUDITH BASIN:

With more cloudiness and rain, day temperatures have been lower than the previous week and the ripening of crops has gone forward slowly. Spring wheat is filling in fair condition.

The harvesting of winter wheat on the station is practically completed. Fields of oats and some early maturing barleys have been cut. Spring wheat is maturing slowly but average yields are in prospect if favorable weather continues for another month. Some of the annual hay crops have been harvested.

Karmont was seeded on the tillage method experiment August 20. Other fields are ready for seeding.

A few combines are cutting winter wheat in the Basin and good yields are reported. With favorable weather the harvesting will be going forward next week.

Visitors during the week included President F. D. Farrell, Kansas State Agricultural College, Mr. C. S. Scofield, in Charge, Western Irrigation Agriculture, Superintendent Dan Hansen, of the Huntley Station, Mr. J. C. Taylor, Extension Director of Montana, Dr. Victor Talanoff, Chief of the Plant Introduction Institute, Leningrad, Russia.

Maximum temperature 78, minimum 41; precipitation, .78 inch.

HUNTLEY:

Rain four days out of the past seven has interfered with harvesting and general field work to some extent. One shower amounting to 1.04 inches and torrential in character caused considerable damage by lodging heavy grain and soaking up shocked material scattered by the wind. Harvesting spring grain nursery and weighing hogs has been the only field work accomplished this week.

The 20th Annual Project Picnic is in progress in the Station park adjoining the Experiment Station, today. It is yet too early to tell what the attendance will be but as the weather is fair and farm work generally in good shape throughout the county, the number of people attending should be large.

Maximum temperature 82, minimum 48; precipitation, 1.30 inches.

SHERIDAN:

Heavy rains the first of the week stopped harvesting until Wednesday. Drying conditions since the rain have been poor. Oats began to grow in the shock, and it has been necessary to reshock all oats on the station.

Spring wheat in the rotations has now been harvested except for a few late maturing plots. Much of the wheat was lodged badly and could be cut only one way. Harvest of small grain on the station is now about completed except for late seedings and the varieties of durum wheat, some of which are not yet fully mature. Millet was cut for hay yesterday.
Maximum temperature 79, minimum 46; precipitation, 1.27 inches.

DICKINSON:

Harvesting was delayed a day and a half the first of the week because of wet weather. The whole week was cool with a minimum of 36 degrees on the night of the 17th.

Wheat, oats and barley on the rotations are all harvested except the A and B plots in the continuously cropped series. These plots were seeded about three weeks later than others and were previously worked three times for the purpose of thinning out the wild oats. This method greatly reduced the amount of wild oats, and as a result of the cool, wet season the later seeding has not greatly reduced the yield.

The two older plantings of alfalfa varieties were cut for the second time and the 1927 planting was cut the first time. Yields of all varieties were less than a ton to the acre.

The earliest corn is now in the roasting ear stage of development.

The cement floor for the seed hour was placed on the 16th, and the contractor began work on the 20th.
Maximum temperature 86, minimum 36; precipitation, .50 inch.

MANDAN:

Agronomy

Rain during the past week interfered with all field work. Fairly heavy rains fell on four days during the period. The rain was of much benefit to corn and flax. Some damage was done to standing grain according to reports received from over the country, but on the station little lodging took place.

Mandan, continued:

Barley in the main field was harvested the latter part of the week. Harvest of the main field wheat plots was delayed today because of a breakdown of the binder.

A good deal of smut has appeared in the corn. It was cut out and removed from most of the corn during the week.

Maximum temperature 88, minimum 43; precipitation, 2.07 inches.

Cooperative Grazing Experiment

Grass still remains in excellent condition for grazing. It is staying green much longer than usual. The recent rains should keep it growing for some time.

The cattle appear to be in excellent condition, and should show good gains for the month of August.

Horticulture

The wet weather in the early part of the week put a stop to field work for several days. The time was spent in cleaning up weeds in and around seed beds, about the buildings, and in roads on the grounds. Budding was resumed Thursday in the nursery, and also the usual routine work in the vegetable plots, such as harvesting and yield taking, hilling of celery, etc. Tomatoes are starting to ripen, and the main sweetcorn crop is almost in the roasting stage. Both of these vegetable crops are about two weeks late this year.

Yellow Transparent and Duchess apples, and Silvia crabapples, are starting to ripen, as is also Opata plum. The fruit crop in general will be decidedly late and rather light, although apples are better than for several years.

Arboriculture

Mr. E. J. George writes from Lusk, Wyoming, on August 11. "Wyoming is comparatively young, when compared with the older states in which we operate, as regards shelterbelts, and the impressions gained now may prove to be entirely wrong when the belts are 5 years older. On the whole, I would say that the plantings have been in the majority of cases very satisfactory both from the farmer's point of view and from ours, as regards the hardiness of the species furnished, and the general methods of planting and care expected of the farmer.

Mandan, continued:

"The trees that suffered last year over the area I have covered are Chinese elm and species of Poplar other than the Northwest. The native Elms also froze to the ground in many cases. Trees of these species in private plantings, and in towns, anywhere from 10 to 20 feet high, are completely dead in some instances, and half killed in others. This, I believe, is unusual for the native elm, and I am inclined to think is due to the early freeze last September and the late freeze in May. Official records show it went below zero in September. The Northwest poplar does not seem to be hurt at all, and other tree species only show a slight tip injury. I find a lot of people do not know what the different trees look like, and I guess it is like one woman remarked who had her shelterbelt all mixed up, who said: "We used to know what the different trees were, but it is so long sine we saw a tree that we had forgotten what they were."

Mr. Lewis S. Matthew writes from Lewistown, Montana, on August 14. "I find many farmers anxious to have their 1929 plantings spaced further apart in the rows than we recommend, so as to make room for power cultivation. A number have bought duckfoot cultivators, which are about 11 feet wide. I am sure the trees will be better cultivated if the work is done by power."

Mr. John L. Emerson writes from Baker, Montana, August 15. "The trees in this section are unusually good, although most of my inspections had to do with '27 and '28 plantings. All the '28s I found in good shape, and the County Agents taking an active interest in the project. In the past several days I have seen only one planting that was a complete failure."

Visitors of the week at the station included, Mr. A. L. Nelson, Superintendent, Archer, Wyo., Field Station, Dr. Victor Talanoff, Chief, Plant Introduction and Variety Testing of Institute of Applied Botany, U.S.S.R. Mr. E. G. Booth, Field Agent in Agronomy, North Dakota Agricultural College, Mr. P. H. Dorsett, Agricultural Explorer, Foreign Plant Introductions.

BELLE FOURCHE:

Showers, totaling .94 inch precipitation, were received during the first three days of the week, and the weather has been cool with unusually cool nights for this time of the season.

Crops have matured rather slowly, but the remainder of the winter wheat and most of the oats on the dry land rotations have been harvested.

Bellefourche, continued:

Strong winds, preceding several of the showers, have caused much of the spring wheat to lodge, and more or less lodging has taken place on the oat plots. Rust infection on oats is the heaviest in the history of the station, and the yields will be materially reduced. Estimates of the rust infection in the cereal rust nursery range as high as 90 per cent for several varieties of oats.

Mr. M. N. Levine, of the Office of Cereal Crops and Diseases, St. Paul, Minn., was a visitor at the station.

Maximum temperature 85, minimum 42; precipitation, .94 inch.

ARDMORE:

A rain of 1.04 inches fell on the night of August 14. This rain was beneficial to corn but delayed threshing for several days. The bulk fields of oats and barley were threshed on August 18 and 19, and the oats in the rotations were threshed on August 20.

Yields of grain were good. The 30 acres of oats on Field 14 produced 45.7 bu. per acre, and the small fields ranged from 40 to 82 bushels per acre. Yields of barley surpassed expectations. A one acre field produced 46.5 bushels per acre, an eight acre field about 50 bushels per acres, and a ten acre field, where the barley was grown on manured fallow, produced 62.3 bushels per acre.

Not all of the plot yields have been computed. The maximum yield was 87.6 bushels per acre on Rotation 76. The lowest was 29.7 bushels per acre on 248 duplicate. The average yield will be between 60 and 70 bushels per acre.

The hogs used in the feeder pig experiments were turned into the cane during the week. The cane was about four feet in height and will furnish an abundant supply of feed. The corn in the hog lot is maturing rapidly and should be ready to turn the pigs into shortly after September 1.

Maximum temperature 84, minimum 40; precipitation, 1.04 inches.

A trace of frost was noted the morning of September 19.

AKRON:

Rains early in the week interfered with field work but only slightly with threshing since it was possible to set the shocks apart and proceed at the end of a half day. Field work started actively Wednesday and proceeded satisfactorily to the week end.

Akron, continued:

The first rate and date seeding of winter wheat was made Wednesday, the 18th. The plowing of the early fall plowed plots of the rotation field was started Wednesday and completed by the week end. The fallow for cereal varieties was spring tooth harrowed. The fallow and small grain stubble for forage varieties, the cereal nursery fallow, the small grain stubble for rate and spacing corn another year, the rotation roadways, and several blocks of small grain stubble land were duck foot cultivated.

The winter wheat on the rate and spacing corn land, the variety barley and the variety winter wheat experiments were threshed as well as a number of small plots of grain for increased seed supplies.

Winter wheat on the rate and spacing corn land yielded uniformly well. The average of 18 plots was 24.2 bushels per acre. This wheat was seeded with the furrow, or so-called lister drill.

The yields from the barley and winter wheat variety experiments were also satisfactory. The high yielding barley varieties on fallow were 09WS, 05WS, and Arequipa which yielded 46.3, 46.0, and 45.0 bushels per acre, respectively. The high yielding varieties on corn land were Arequipa, Club Mariout, and 05WS which yielded 25.8, 27.5 and 24.3 bushels per acre, respectively. The high yielding varieites on fallow and corn land, two plots on fallow and two plots on corn land, were Arequipa, 09WS, and 05WS which yielded 35.4, 35.4 and 35.2 bushels per acre, respectively.

The barley seed had not been treated and in some varieties the smut infection was quite heavy. However, the susceptibility of the varieties to the particular smut strain present was very marked. For instance, White Smyrna C.I. 2642, 02WS, 09WS and Trebi were very susceptible and showed a high percentage of smut. Colsess, C.A.C. 2286 and 2287 and 013WS showed traces of smut. Blackhull, Club and California Mariouts, Flynn, Arequipa, and 05WS appeared to be absolutely immune to the smut.

The high yielding winter wheat varieties on fallow were Kansas 441, Pesterboden Selection 2-11, and Tenmark which yielded 30.8, 27.5 and 27.3 bushels per acre, respectively. The high yielding varieties on corn land were Tenmark, Kansas 441, and Pesterboden Selection 2-11 which yielded 17.7, 16.4, and 15.0 bushels per acre, respectively. The high yielding varieties on fallow and corn land, two plots on fallow and two plots on corn land were Kansas 441, Tenmark, and Pesterboden Selection 2-11 which yielded 23.6, 22.5, and 22.2 bushels per acre, respectively.

One-fifth of an acre of White Smyrna Barley C.I. 2642 increased on fallow yielded at the rate of 43.2 bushels per acre. Three-tenths of an acre of Prelude spring wheat increased on fallow yielded at the rate of 25.2 bushels per acre. Three-tenths of an acre of Hard Federation spring wheat increased on fallow yielded at the rate of 14.1 bushels of poor quali grain per acre. The Hard Federation and Prelude were seeded side by side and at harvest time the Hard Federation promised to outyield the prelude. The low yield and the poor quality of the Hard Federation must be attribute to the Black Stem Rust which badly infested this grain without appreciably affecting any other spring or winter grain on the station.

Yellow Transparent and Duchess of Oldenburg apples and Florence Crab apples were picked during the week. The Transparent and Oldenburg varieties averaged about a bushel and a half of fruit to the tree, while the Florence Crab yielded at the rate of about three bushels of fruit to the tree. There is a gratifying showing of apples in the fruit garden this year for the first time in the history of the orchard. The one tree of Red June produced a bushel of fruit. The two trees of Okabena which are now ripe promise a bushel and a half per tree. Wealthy, Patton Greening and Malinda Crab each promise a good yield of fruit with a varying showing of fruit on Peerless, McIntosh, Northwestern Greening, Bismark, and Longfield apples, and Lyman Prolific, Minnesota, Virginia, Hyslop, and Dart Crabs.

Corn is filling well and barring an early frost should mature, though the crop is late. Sudan grass is heading short and sorgos are heading uneavenly. Beans are blooming profusely. Millet is about ripe for seed production and though weedy the crop has been able to maintain a dominance over the weeds.

Maximum temperature 81, minimum 45; precipitation, .71 inch.

ARCHER:

During the past two weeks the weather has been cool with high humidity, with considerable rain and hail accompanied by heavy winds. The corn and oats were especially damaged by hail and wind. The tassels of the corn were battered badly and the shoots which are silking will probably be only partially fertilized. At least fifty per cent of the oats on the Dry-Land plots were shattered. The same condition exists in the earlier varieties of oats in the varietal experiment.

The barley on the Dry-Land plots has been harvested. The early varieties of oats and barleys are ripe and winter wheat on stubble is ripening. Maturity of all crops is very gradual due to the cool, wet weather.

Until the last few days, work at the station has consisted mostly of weeding. Harvesting of millet for hay is in progress.

Maximum temperature 81, minimum 43; precipitation, 1.53 inches.

NORTH PLATTE:

The week has been characterized by cool, cloudy weather with a maximum temperature of 84 and a minimum of 43 degrees. This was recorded on Thursday night. No precipitation was recorded during the week.

Corn has not made much progress due to the cool weather. Field work for the week consisted largely of cutting weeds.

COLBY:

Threshing was completed during the week. Yields of the small grains were for the most part decidedly unprofitable. The test weight was low and in keeping with the yields.

The final, unless a hard beating rain comes, spring tooth harrowing of the D. L. A. fallow plots was given during the week. There was very little growth starting on the fallow plots but it was thought best to work the ground after the several showers that we have had. The total rainfall for August to date has been only 1.41 inches. The many showers with the low wind movement and low temperatures might lead one to think that the precipitation had been more than that.

Corn for the most part is filling out well. The D. L. A. corn has not suffered especially, except that on Rotations No. 1, 3, 4, and 6. The cultural treatment has been the cause of this as MCB shows almost identical suffering.

Milo is just starting to head to about 50% headed. Feterita is just about fully headed. Kafir is just starting to head Other sorghums are in a comparable stage of development. Relatively warmer weather with more moisture will be needed to mature some of the sorghums and the later corn.

Feed crops on the station are growing nicely and give promise now that silos may be filled this year. About half of the commercial sorghums on the station are rather weedy. This is due principally to the blow condition of the ground this spring.

Maximum temperature for the week 85, minimum 40 degrees on the night of the 18th. Precipitation was .30 inch. Evaporation 1.542 inches. Wind velocity for the 8 ft. anemometer 6.7 m.p.h., and for the 2 ft. anemometer 4.2 m.p.h.

HAYS:

Our wet period recently experienced has apparently come to a close, but not until after one more inch of rain was added during the week to the August record which made a total of 4.66 inches for the first 16 days of the month.

The ground is now so thoroughly soaked at least at and near the surface, and is still so wet that no surface tillage on plowed or listed fields has been accomplished since the rainy period started. However, on plowed and listed fields the weed growth is still small and the volunteer wheat is all well started but not so big but what one good thorough surface tillage will kill practically all of it. On untouched stubble fields the weed growth is the heaviest it has been in years. It now looks like these farmers who "waited" during July for rains to make the ground "plow easy" will be disappointed, for in many fields the weeds and especially the thistles are so large they can not be plowed under, and these are rapidly using moisture that should have been conserved for the next wheat crop.

Corn, kafir and milo plots which have been heavily infested with chinch bugs are holding up remarkably well, but these cannot make a normal yield for a season of such favorable climatic conditions.

Kafir is from 5 to 6 feet high and heading very evenly. Milo is about 50% headed. Corn is in the roasting ear stage. Brome grass on all three plots looks very fine and would make good pasture,--a very unusual behavior for August. Alfalfa is nice but not making much growth on the upland. The third cutting will soon be ready on the bottom land.

Field work during the week consisted largely in moving and hauling off the heavy crop of weeds from some of the stubble plots and ditch building. Some of the drainage ditches, while sufficiently deep, were not wide enough to carry away the runoff rapidly enough to prevent flooding of certain plots during the continuous heavy rains. These were spotted during the high waters and are now being widened and graded so as to give the flood waters a more rapid get-a-way without making the ditches too deep and too steep for convenient crossing with the farm machinery.

GARDEN CITY:

Fall-like weather has prevailed during the past week. Rains yielding 1.22 inches of precipitation were received during the first three days of the week. Although most crops were not suffering for lack of moisture, these rains seem to stimulate growth. All row crops are looking good at this time, but are somewhat later than usual.

Garden City, continued:

Milo is pretty well headed but kafir is just beginning to head. If we do not get an early frost, prospects are good for an average crop.

The soil was too wet to permit much field work. Some hoeing was done late in the week. Threshing of small grains from the irrigated project was completed today. No exceptionally high yields were produced. The third cutting of alfalfa is being shocked today.

Maximum temperature 93, minimum 50; precipitation, 1.22 inches.

DALHART:

Warm and fair weather has prevailed during most of the past week. Three showers were recorded but not sufficient to halt field operations for long. The total for the three showers is .40 inch, with .18 inch maximum.

Work has progressed rapidly during the week and this afternoon's work will put all experimental plots in shape for inspection. Two of the increase fields are pretty weedy in the rows but the centers are clean. Some badly needed mowing was done the past few days and there is quite a bit of it to be done yet on roadways. The mower was laid up for repairs for several days longer than necessary on account of the expressman overlooking the repairs to turn over to the dealer. The well was worked on one morning when rain stopped field work. The leathers were badly worn so that we were not getting any water. Since fixing the pump we have had very little wind, but sufficient has blown to prevent our running short.

The field work has consisted of hoeing, cultivating and plowing. A good deal of harvesting was done this week also. The drilled Sudan in the forage variety test was harvested, also about 12 tons of Sudan for hay which was grown on the small field which was in clover for about three years. This is the field which has blue weeds on it. The growing of clover on it enabled us to get the best yield of hay grown on it for a number of years. Sudan grass on Rotations 84 and 87 was harvested on the 17th.

A picnic is being held here this afternoon. On Friday evening three out-of-town visitors were here and went over the station. One was from Enid, Oklahoma and the other two from Spearman, Texas. They were favorably impressed with the way crops are looking here and expressed an appreciation for the work being conducted for their benefit. They were all farmers, and were here looking the country over with a prospect of purchasing land here.

Maximum temperature 90, minimum 55; precipitation, .40 inch.

TUCUMCARI:

The weather has been unusually cool the past week, with little wind movement and much cloudiness. These conditions have favored rapid vegetative growth and at present milo has attained more size than in any season of the past six, although very few heads have emerged from the boot. Kafir and sorgos also promise heavy forage yields, and, it is hoped, good grain yields. Cowpeas planted June 24 have made such rapid growth that the vines nearly cover the 44 inch rows.

During the past week all plots have been cultivated, with the exception of corn. In many cases the growth was so rank it was necessary to cultivate in the afternoon, when plants did not break off. Heavy rainfall early in the month delayed the second cultivation to such an extent it was feared the one-horse cultivator would have to be used, but it was found that all plots except those of corn could be handled with the sulkies. Weeds are making very rapid growth and the mower has been in use much of the week on roadways, fence lines, and along hedges.

In spite of cool, cloudy weather depletion of moisture in the M.C. milo plots was very rapid, showing to some extent the heavy moisture requirement of the rank growth. The loss of moisture in the first foot from August 11 to August 18 ranged from five to six per cent. There was very little change in lower feet. On the fallow plot the first foot lost less than two per cent, while every other foot showed a small gain on August 18, over August 11.

Farmers on the plains are rapidly getting wheat land ready for seeding. Indications point not only to an unusually heavy acreage, but to better prepared land and earlier seeding than customary.

Maximum temperature 92, minimum 57; precipitation, .70 inch.
Evaporation, 1.579 inches. Average hour wind velocity, 3.5 miles.

BIG SPRING:

Weather conditions during the past week have remained, except to get a little drier. On several occasions rains threatened but they always seem to fall some other place. There are sections south of Big Spring where it has gotten so dry that the ranchers have found it necessary to sell their entire herds of cattle, while other sections of the county report sufficient rain for good grass and normal crop yields.

Cotton is still growing and fruiting fairly well, but the other crops are burning considerably.

Big Spring, continued:

Fried's Sorgo in the forage varieties was harvested this week, as were several of the early dates of grain sorghums. Sudan grass from the early dates and the variety plots was hauled in. The barn was given a coat of paint during the week.

Maximum temperature 101, minimum 67; precipitation, .10 inch.

LAWTON:

Hot weather which prevailed during the fore part of the week changed to cool, cloudy, showery days with heavy dews at night. Maximum temperature during this period have been as low as 79 and 80, while the minimum for the week was 60.

The weather has been entirely too cool for the rapid development of cotton and considerable abortion of young squares and small bolls has been quite noticeable. In some instances this is due to boll worm damage but a great many of the fallen bolls show no insect damage. The leaves on a great deal of the cotton indicate the possibility of the presence of some fungus or bacterial disease.

Cotton planted April 15 and May 1 is much more heavily fruited than any of the later plantings. The earlier maturing varieties, such as Okla. 44 and Acala are showing a considerable number of open bolls on the April 15 and May 1 plantings.

The cotton leaf worm is just emerging from the alfalfa fields. Control measures in the form of trap furrows are being made between alfalfa and cotton and other protective measures in the form of spray and poisoned bait will be resorted to if necessary.

Cowpeas have been difficult to cure this year because of the cool, cloudy weather but we are patiently nursing the crop along with the hope of finally getting it in the stack in fair shape.

Precipitation in the form of three showers during the week amounted to .30 inch.

WOODWARD:

Today, August 20, storm clouds are again lowering although it is only five days since the last rain and the soil is not yet dry enough to do much field work.

Woodward, continued:

Since July 10 there has been 10.01 inches of rain and five days is the longest period without rain. This sort of weather is very difficult to manage for people accustomed to Dry Land conditions.

Great difficulty has been experienced, especially in curing the large acreage of Sudan hay that was planted this year, and is hard to cure under the best conditions. Under the low temperatures prevailing the past week, when nothing dries out, it is likely that much of this crop will rot, making a great loss since the yield is three times the average.

Grapes are being harvested daily. The quality is very good, but yields are little if any greater than in drier years. The growth of vines is, however, very heavy and increase in fruiting may show up next year, due to increaased vigor of the vines. The yields of grapes have, however, varied little, due to moisture conditions. Yields in dry years have severely taxed the vines.

Maximum temperature 96, minimum 56; precipitation, 1.30 inches.
Evaporation, 1.660 inches. Average hourly wind velocity, 4.2 miles.

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OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

AUG 27 1927

REPORT FOR WEEK ENDING AUGUST 27, 1927.

JUDITH BASIN:

Fairly cool weather continued during the past week with the temperature going above 80 only one time. Warmer weather would be favorable for all spring sown crops in the Basin.

Combining of winter wheat is in progress in all central Montana sections with average yields of 30 to 35 bushels being reported. Spring wheat is ripening slowly. Some growers who planned to combine are contemplating binding to hasten the maturity of this crop. Early oats have been harvested but barley is backward.

Threshing of winter wheat is completed at the station. A four acre field of registered Karmont returned a yield of 36 bushels per acre. Winter wheat and oats on the rotations were threshed with average yields of wheat and fair yields of oats being obtained.

Feed on the pasture experiments is holding up in fair shape. Increase fields of crested wheat grass seed are being harvested.

Mr. K. S. Quisenberry, of the Office of Cereal Crops and Diseases, completed three weeks of work on the Cereal Project.

Maximum temperature 82, minimum 45; precipitation, .12 inch

HUNTLEY:

The rains of a week ago together with showers the fore part of this week held up threshing operations until the 25th. The work was again interrupted late in the afternoon of the 26th by rain and it will probably be another day before we can resume.

Threshing of winter and spring wheat in the rotations, variety tests and miscellaneous plantings was completed before the rains. Yields have not yet been calculated for all plots but the indications are that the returns will all be much above the average for all cultural methods. The maximum yield of both winter and spring wheat in the rotations was 51 bushels to the acre. This yield was made by winter wheat in Rotation 85 and by spring wheat in Rotation 570. In the variety tests some winter wheat on 1/20th acre plots went at the rate of 60 bushels to the acre.

The past week has been unseasonably cool. This condition, together with the abundance of moisture now available for late crops, is prolonging the maturity of corn, beans and potatoes to the extent that they may be injured by frost before ripening.

Maximum temperature 86, minimum 46; precipitation, 1.03 inches.

SHERIDAN:

Rains early in the week delayed drying of millet and alfalfa hay that was cut some time ago. Drying conditions since have been poor but by turning them several times on the ground these crops have finally been dried sufficiently to secure weights on them today. All grain has now been harvested except late seeded spring wheat. Field peas are being threshed today.

Flax is ripening, but is uneven. Some bolls are fully ripe while a large part of them are quite green. Corn has made slow progress, being now in the milk. If frost holds off long enough for the corn to ripen, a heavy yield is indicated, even with a poor stand in the rotations field.

The rainfall for August totals 2.9 inches to date. This is over four times the average for the month here and is over twice the highest rainfall previously recorded here for this month. The average wind velocity has been exceptionally low also.

Maximum temperature 84, minimum 43; Precipitation, .34 inch.

DICKINSON:

Harvesting of all small grain plots was completed except flax. Some of the later varieties in the wheat nursery and all of the winter wheat nursery are still to be cut. The stands of winter wheat which survived have ripened very slowly.

Threshing was started August 24. About 100 bushels of crested wheat grass were threshed. The seed will have to be cleaned before exact yields are figured. The plots averaged around 250 pounds of clean seed. The best yield was a patch on low land seeded broadcast four years ago. This planting will give about 500 pounds an acre of clean seed. Slender wheat grass, brome, and the field peas were also threshed.

Seed of the earlier sweet clover varieties was harvested in the nursery.

Silvia crab and Opata plum are now about ripe. Opata is the only variety of plum having anything like a full crop.

The weather was too cool for corn and late forage crops. Some of the corn in the district has not tasseled and the earliest is just in the roasting ear stage. Dakota Amber is the only variety of cane that has headed to date. A new variety, "Sagrain", sent here for trial is over a foot shorter than other varieties and will not mature. Millet yields will be heavy as the later plantings are starting to head at about three feet in height.

Visitors included Messrs. F. D. Richey, Agronomist in Charge of Corn Investigations, Office of Cereal Crops and Diseases, John Husby, State Dairy Commissioner, and A. M. Challey, State Agent in Dairying.

Maximum temperature 89, minimum 44; precipitation, .04 inch.

MANDAN:

Agronomy

The past week has been fairly favorable for all field work. Rain at the end of the week delayed putting up wild hay. The rain also delayed the possibility of the start of threshing early next week.

The millet varieties and the second crop of alfalfa were harvested during the week.

Corn is being gone over the second time to remove smut, which is very bad this year. It is just passing the roasting ear stage and weather has remained too cool for its best advancement.

The delayed harvesting of wheat in the rotations was completed during the week.

A fairly high wind accompanied the rain of yesterday and blew over some corn. The rain was no doubt much heavier south of the station.

Maximum temperature 86, minimum 46; precipitation, .72 inch.

Cooperative Grazing Experiment

Pastures still remain in excellent condition for grazing.

The hay in the mowing experiment was cut during the week. It was caught in the rain, and only part of it was hauled in. The yield per acre will be much above the average.

Arboriculture

The shelterbelt inspectors should all have returned before the end of the month, but are late on their schedules due to weather conditions, making the roads difficult to travel.

Horticulture

The budding work was completed today. The storm which hit this ar yesterday, August 26, caused considerable damage to the station orchards. Much fruit, especially apples, was blown off the trees. As so many varieties were full grown, and in several cases nearly mature, yields were take

Mandan, continued:

Vegetables are continuing to yield abundantly. Golden Bantam sweet corn is now in prime condition, as is also cabbage and late planted cauliflower.

Damage was done during the storm of Friday night, August 26, to the station implement shed, by a bolt of lightning, which struck the roof, knocked off a number of the asbestos shingles, and splintered one or two rafters. Apparently, further damage was averted by the current hitting an electric light wire and grounding itself through a fuse box.

Visitors of the week included Mr. F. D. Richey, Corn Investigations.

BELLE FOURCHE:

Relatively warm weather has prevailed throughout most of the week, and spring wheat is ripening rapidly, but it is doubtful if any of the plots in the dry land rotations will be mature before September 1. Strong winds have caused more or less lodging of spring wheat on all plots, and the rust infection is unusually heavy. The remainder of the oats and barley were harvested.

Mr. D. V. Kopeland, of the Ardmore Field Station, was a visitor on August 25, and Mr. S. Lockwood, of the Office of Cereal and Forage Insects, has been carrying on cricket control investigations at the station during most of the week.

Maximum temperature 88, minimum 48; precipitation, .43 inch.

ARDMORE:

The weather was favorable for field work during the entire week. All of the grain varieties and all of the grain in the rotations except flax plots was threshed during the week.

The average yield of spring wheat in the rotations was 32.0 bushels per acre. Other grains were as follows: oats, 66.4 bu. per acre; barley, 51.3 bu. per acre; and winter wheat, 18.6 bu. per acre. The yield of winter wheat was reduced considerably by stem rust. Stem rust caused a small amount of damage to the spring wheat. Oats were badly rusted but were of good quality and the heavy rust infection apparently caused little or no reduction in yield.

All of the summer fallow in the fields and rotations was cultivated with the duckfoot cultivator. Straw baling is now well under way.

Ardmore, continued:

Mr. E. Z. Russell visited the station on August 23. Mr. W. H. Black and Mr. W. A. Stenhouse were at the station on August 25. Mr. Stenhouse photographed the dairy and beef cattle, and also took some pictures of the vegetation in the pastures. Mr. Stewart Lockwood, of the Bureau of Entomology, was at the station on August 26.

Maximum temperature 89, minimum 45; precipitation, .16 inch.

ARCHER:

The week has continued cool with thunder showers every afternoon. Sometimes the edges touched the station and at other times a fair shower occurred. The total precipitation for the week is .60 of an inch. These conditions are causing the grain to ripen slowly. However, harvesting was begun in earnest August 25. Most of the winter wheat and the early varieties of barley and oats have been harvested. The oats on the Dry-Land plots are nearly ripe and the threshing of Dry-Land barley plots takes place today.

Other work at the station has consisted of cutting of the millet in the dairly field, roguing some of the variety plots and the completion of the digging of the trench for the water line to the new house.

Maximum temperature 82, minimum 51; precipitation, .60 inch.

AKRON:

The week was free of rains until the last days when .38 inch and .30 inch was received on the 25th and 26th, respectively. The rain on the 25th was accompanied by some hail which lacerated corn and sorgo leaves.

The threshing of the rate and date winter wheat experiment was completed early in the week. The first replications on fallow and corn land were probably valueless because of the varying amount of snow which lodged on these plots during the winter. On fallow land the October 15 seeding date showed the highest yield, while on corn land the August 15 seeding date showed the highest yield. A composite yield from the two preparations showed October 15 seeding date giving the highest yield. On corn land the light seedings prevailed, or held their own, until the October 4 seeding date when heavier seeding rates prevailed or held their own.

Work during the week included the completing of the threshing of the small grains, harvesting the millets in the forage variety experiment, the rate and spacing corn land, and the increase plots, hoeing weeds and other odd jobs.

Akron, continued:

The Burlington Smut Special visited Akron on Wednesday and during its stay time was found for showing the station to a few of the visitors. The visitors from this train included two officials from the Omaha Grain Exchange, Mr. D. L. Gross, Extension Agronomist for Nebraska, and Mr. Howard Biggar, representing the Amaha Daily Record-Stockman.

Professor Hansen, from the State College, vistied the station Friday taking notes on the sheep pastures. Mr. Radford, representing Western Farm Life, was shown over the station Saturday morning.

The County Fair was held during the last three days of the week. Agricultural exhibits were light, probably due to the earliness of the fair and the lateness of the season. Livestock exhibits were up to the standard in quantity and better in quality due to out-of-county competition. Attendance was light, probably due to the fact that harvesting is but barely completed and practically no threshing done with fall seeding time at hand.

Maximum temperature 88, minimum 49; precipitation, .68 inch.

NORTH PLATTE:

The past week has been characterized by cool weather with precipitation recorded on four days in amounts varying from a trace to .06 of an inch. The maximum temperature, which occurred on Friday, was 85 degrees. The minimum temperature, which was recorded Monday night, was 44 degrees. Field work for the week consisted of cutting weeds and preparing to fill the silos.

Corn is somewhat late and has made exceptional growth.

Dean E. A. Burnett, of the College of Agriculture, was a station visitor Thursday and Friday.

COLBY:

Corn continues to mature although there are many ears in the roasting ear stage at the present time. Some fields and a few plots of corn are drying up quite noticeably. The most of the corn is green and many of the fields are almost filled with "red-root" weeds. Everyone seems to think that weeds were never worse than they have been this season.

Sorghums while not growing luxuriantly are growing well, and have a deep green color. The cool weather is retarding the growth of the sorghums.

Colby, continued:

A trip taken the first of the week into the four counties of Northwestern Kansas and into Eastern Colorado would indicate that crop conditions are almost identical throughout the territory. Winter wheat was very similar to that on the station and in the immediate vicinity. Low yields of a poor quality of wheat were harvested or were being harvested. Corn fields were green, late, and in most instances very weedy with Amaranthus. Sorghum fields were fine where closely drilled, but in most instances, weedy where the sorghum had been listed.

Rains in this territory have been local showers this season. They have been about equally distributed except that hail strips have been rather a dominating factor in crop production in many places. Every shower of any extent, seems to even now carry some hail that wipes out the vegetation in its path. Hail storms have been rather frequent this season. So far, no destructive hail has fallen on the station but there are places where hail in destructive quantities has fallen twice this season. During one ten mile stretch of the trip the following farming operations were noted:- Cultivating summer tilled land, disking summer tilled land, harrowing summer tilled land, drilling wheat, plowing stubble with moldboard plow, with disk plow, and with the one-way disk, disking wheat stubble, listing wheat stubble, throwing in listed wheat stubble, combining wheat, and threshing.

Maximum temperature during the week 89, minimum 54. Precipitation, 0.46 inch; evaporation, 1.237 inches. Average hourly wind velocity for the 8 ft. anemometer, 10.4 m.p.h.; for the 2 ft. anemometer, 7.3 m.p.h.

HAYS:

During the week two more rains totaling 1.72 inches were added to the August precipitation making the total for the month to date 6.38 inches. This is the highest precipitation record for the month of August in sixty years. The previous highest record for August is 5.86 inches in the year 1908.

Needless to say the ground is wet, and the unthreshed wheat stacks are also wet and consequently considerable damage added to the already poor wheat crop. It is reported to be very exceptional to find a wheat stack in this locality that is not wet from top to bottom. It is one of the years when the argument is strong in favor of the combine method of harvesting.

Hays, continued:

The writer has never before seen the country at this time of the year so completely covered with a growth of weeds and volunteer wheat. There are very few "black" fields in sight. There has been during the month of August practically no time when a satisfactory job of surface tillage could be done for weed killing because of the wet weather or wet ground. As a result, the stubble fields which have not been worked are for the most part covered with a hugh growth of weeds, thistles or grass, or a combination of all three. The plowed and listed fields are well covered with volunteer wheat and the disked fields have a good growth of both volunteer wheat and weeds, the disking having covered the wheat so it all germinated and thinned the weeds so the survivors have made a wonderful growth.

The volunteer wheat on the plowed and listed fields can be cleared away with some thorough surface cultivation when the ground gets dry enough and should make an excellent seedbed, but it is a problem to determine just what will be the best method of procedure on the disked and untouched stubble land and especially the latter. On some fields the growth of Russian thistles and red root is now so large and sprangled that these weeds choke a plow so the ground cannot be plowed until the weed growth is removed. A disk will not cut through the growth and there is no drill that will work satisfactorily on these fields without first having a large part of the growth removed. It looks like about the best chance now is to mow the weeds and remove by hauling off or burning and then disk or shallow plow.

There has been but little wind and little sunshine. All feed crops are looking exceedingly good, but some sunshine and warm weather is needed to hurry some of the crops along to maturity before frost.
Maximum temperature 88, minimum 49.

GARDEN CITY:

More cool, cloudy weather was recorded the past week. Two rains netting seven-tenths of an inch of moisture were received. August has been an exceptionally cool month and most crops have made a vegetative growth, rather than trying to produce seed.

Sorghums, which were planted at a later date than usual, are not very far advanced at this time. Milo is practically all headed and kafir is just emerging from the boot. We need some high temperatures if these crops are to mature ahead of frost.

Garden City, continued:

For the past two weeks the fields have been too wet to accomplish much field work. All fallows were spring tooth harrowed yesterday, August 26, but many weeds still remain. The rains have caused an abnormal weed growth for this time of year. How to kill the weeds without getting the seedbed too loose for wheat seeding is a problem. The station force is busy preparing for our annual field day.

Maximum temperature 94, minimum 56; precipitation, .7 inch.

DALHART:

The past week has been hot and dry. There has been plenty of wind for pumping water but none in excess of regular needs. The only indication of rain during the week came this evening about 6:45 p.m. Clouds began to gather in the northwest earlier in the evening and about the time above mentioned a heavy wind came up from the northwest and blew unusually hard for about 30 minutes then quieted down. Indications are not so favorable just now as at the time the wind started.

Crops are needing rain badly. They are headed and are at the point where they need rain most. Nearly all crops are firing badly except on fallows and these are beginning. Crops on the rotations in the north field are not doing anything extra. The soil there is such that there is an unusually uneven growth on nearly all of the rotations and on the methods of fallow kafir plots. The C.C. methods and Rotations 160, 166 and 167 are looking good. The rotations in the west field are showing up in good shape. All of the grain and forage sorghum varieties are making a good showing.

Work for the past week has consisted of hoeing in the increase field, bagging milo for seed, mowing roadways, raking and hauling of weeds and hay. About two tons of excellent hay was obtained and stored in the barn.

Maximum temperature 93, minimum 57; precipitation, 0.

TUCUMCARI:

Crop growth the past week has been very satisfactory, milo and kafir plots in the Dry Land experiments heading extensively, about eight weeks after planting. June corn planted June 20 and 24 is from six to eight feet tall, but as yet has not even begun to tassel. Cowpeas promise the best yield in several years.

Tucumcari, continued:

Work has consited of field cultivating fallows, cultivating corn with walking cultivator, cleaning of vineyard, orchard and tree rows, mowing weeds, and harvesting the first crop of Sudan grass on plots. Some hoeing on increase strips was necessary.

Pasture grass could not be better and considerable native hay will be made, the small number of cattle not being able to make appreciable headway in grazing it off. Cattle are daily advancing in price and some of the shrewd cattlemen are considering selling their herds. Some of these see a chance to pay off obligations, while others believe they can buy again within a year or two at lower prices. Calves are expected to bring from $30 to $35, while yearlings will weigh out now in the vicinity of $45 to $50, on the basis of prices offered.

While the row crop acreage is light, yields will probably be higher per acre than in the past few seasons, provided normally favorable conditions prevail the next two months. A very heavy wheat acreage will be seeded this fall and no doubt more land is now prepared than in any previous year at this date.

The grape harvest is about completed. While the yield was low, nearly every vine produced something of a crop. In most cases bunches were poorly filled, due to the severe wind and cutting sand which blew just when grapes were blooming. In spite of very severe spring conditions, not one established vine died, although some vines planted this spring never started growth.

Maximum temperature 94, minimum 57; precipitation, Trace.
Evaporation, 1.879 inches. Average hourly wind velocity, 4.1 miles.

BIG SPRING:

Weather conditions have remained unchanged during the past week, although the maximum temperature has not been as high as during the previous weeks.

Many reports of leaf worm damage to cotton are coming in from sections that have been favored with recent rains. The station has had a large number of calls for information regarding methods of poisoning this pest. During the week some 60,000 pounds of calcium arsenate have been sold to the farmers of Howard County for leaf worm poisoning.

Cowpeas in the rotations and in an increase field were harvested during the week; yields will be light. Sudan grass hay from the plots and from an increase field was put in the barn. A second cutting of Sudan grass looks rather doubtful now, as the second crop has not started to grow as yet.

Maximum temperature 99, minimum 63; precipitation, 0.

LAWTON:

Semi-cloudy, threatening, cool weather with only .04 inch of precipitation depicts climatic conditions during the past week. Maximum temperatures varied from 79 to 93 degrees with an average of 87 degrees. Minimum temperatures ranged from 60 to 68 degrees with an average of 65 degrees. The mean temperature for the week was 6 degrees below the August normal.

Kafir, fetorita and sumac continue to mature slowly but will likely be ready for harvest within a few days. Chinch bugs are responsible for considerable lodging.

The heaviest infestation of army worms that has existed for several years is migrating from grasses of various kinds--crab grass especially-- to the cotton fields. Unless control measures are put into effect, considerable damage may be done. Defoliation of the plants this early in the season will seriously retard the development of the top crop which will add very materially to the yield of cotton planted after May 1 this year. Although alfalfa and crab grass on the station are thoroughly infested with worms the cotton has not yet been damaged. In addition to trap furrows a lead arsenate spray was applied to sides and ends of plots that are exposed to grass areas.

Messrs. H. C. McNamara and Dow D. Porter, of Greenville, Texas, and C. B. Doyle and R. L. Taylor, of Washington, D. C. , were station visitors, August 26.

WOODWARD:

Saturday, August 27, is the first day this week when the forenoon has not been characterized by a heavy fog. Work of the week has consisted of doing mowing and other cleanup jobs during the mornings and putting up hay in the afternoons. Most of our big hay crop is now up in fair shape despite adverse weather conditions. Many varieties of grapes were picked and disposed of, and practically the last of the peaches were harvested.

The greatest need of farmers at present is a week or two or dry weather in which to get their fields in shape for wheat planting. Most fields were disked or listed early and are now green with volunteer wheat or weeds.

Maximum temperature 92, minimum 59; precipitation, .07 inch.
Evaporation, 1.256 inches. Average hourly wind velocity, 5.5 miles.